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HUMAN TRAITS IN THE ANIMALS

THAT there is a deal of human nature in the lower animals is a very obvious fact; or we may turn the proposition around and say, with equal truth, that there is a deal of animal nature in us humans. If man is of animal origin, as we are now all coming to believe, how could this be otherwise? We are all made of one stuff, the functions of our bodies are practically the same, and the workings of our instincts and our emotional and involuntary natures are in many ways identical. I am not now thinking of any part or lot which the lower orders may have in our intellectual or moral life, a point upon which, as my reader may know, I diverge from the popular conception of these matters, but of the extent in which they share with us the ground or basement story of the house of life — certain fundamental traits, instincts, and blind gropings.

Man is a bundle of instincts, impulses, predilections, race and family affinities, and antagonisms, supplemented by the gift of reason — a gift of which he sometimes makes use. The animal is

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a bundle of instincts, impulses, affinities, appetites, and race traits, without the extra gift of reason.

The animal has sensation, perception, and power of association, and these suffice it. Man has sensation, perception, memory, comparison, ideality, judgment, and the like, which suffice him.

There can be no dispute, I suppose, as to certain emotions and impulses being exclusively human, such as awe, veneration, humility, reverence, self-sacrifice, shame, modesty, and many others that are characteristic of what we call our moral nature. Then there are certain others that we share with our dumb neighbors — curiosity, jealousy, joy, anger, sex love, the maternal and paternal instinct, the instinct of fear, of self-preservation, and so forth.

There is at least one instinct or faculty that the animals have far more fully developed than we have — the homing instinct, which seems to imply a sense of direction that we have not. We have lost it because we have other faculties to take its place, just as we have lost that acute sense of smell that is so marvelously developed in many of the four-footed creatures. It has long been a contention of mine that the animals all possess the knowledge and intelligence which is necessary to their self-preservation and the perpetuity of the species, and that is about all. This homing instinct seems to be one of the special powers that the animals cannot get along without. If the solitary wasp, for instance,

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could not find her way back to that minute spot in the field where her nest is made, a feat quite impossible to you or me, so indistinguishable to our eye is that square inch of ground in which her hole is made; or if the fur seal could not in spring retrace its course to the islands upon which it breeds, through a thousand leagues of pathless sea water, how soon the tribe of each would perish!

The animal is, like the skater, a marvel of skill in one field or element, or in certain fixed conditions, while man's varied but less specialized powers make him at home in many fields. Some of the animals outsee man, outsmell him, outhear him, outrun him, outswim him, because their lives depend more upon these special powers than his does; but he can outwit them all because he has the resourcefulness of reason, and is at home in many different fields. The condor "houses herself with the sky" that she may have a high point of observation for the exercise of that marvelous power of vision. An object in the landscape beneath that would escape the human eye is revealed to the soaring buzzard. It stands these birds in hand to see thus sharply; their dinner depends upon it. If mine depended upon such powers of vision, in the course of time I might come to possess it. I am not certain but that we have lost another power that I suspect the lower animals possess — something analogous to, or identical with, what we call telepathy — power to

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communicate without words, or signs, or signals. There are many things in animal life, such as the precise concert of action among flocks of birds and fishes and insects, and, at times, the unity of impulse among land animals, that give support to the notion that the wild creatures in some way come to share one another's mental or emotional states to a degree and in a way that we know little or nothing of. It seems important to their well-being that they should have such a gift — something to make good to them the want of language and mental concepts, and insure unity of action in the tribe. Their seasonal migrations from one part of the country to another are no doubt the promptings of an inborn instinct called into action in all by the recurrence of the same outward conditions; but the movements of the flock or the school seem to imply a common impulse that is awakened on the instant in each member of the flock. The animals have no systems or methods in the sense that we have, but like conditions with them always awaken like impulses, and unity of action is reached without outward communication.

The lower animals seem to have certain of our foibles, and antagonisms, and unreasoning petulancies. I was reminded of this in reading the story President Roosevelt tells of a Colorado bear he once watched at close quarters. The bear was fussing around a carcass of a deer, preparatory to burying

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it. "Once the bear lost his grip and rolled over during the course of some movement, and this made him angry and he struck the carcass a savage whack, just as a pettish child will strike a table against which it has knocked itself." Who does not recognize that trait in himself: the disposition to vent one's anger upon inanimate things — upon his hat, for instance, when the wind snatches it off his head and drops it in the mud or leads him a chase for it across the street; or upon the stick that tripped him up, or the beam against which he bumped his head? We do not all carry our anger so far as did a little ~~three-year-old~~ maiden I heard of, who, on tripping over the rockers of her chair, promptly picked herself up, and carrying the chair to a closet, pushed it in and spitefully shut the door on it, leaving it alone in the dark to repent its wrong-doing.

Our blind, unreasoning animal anger is excited by whatever opposes or baffles us. Of course, when we yield to the anger, we do not act as reasonable beings, but as the unreasoning animals. It is hard for one to control this feeling when the opposition comes from some living creature, as a balky horse or a kicking cow, or a pig that will not be driven through the open gate. When I was a boy, I once saw one of my uncles kick a hive of bees off the stand and halfway across the yard, because the bees stung him when he was about to "take them

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up." I confess to a fair share of this petulant, un-reasoning animal or human trait, whichever it may be, myself. It is difficult for me to refrain from jumping upon my hat when, in my pursuit of it across the street, it has escaped me two or three times just as I was about to put my hand upon it, and as for a balky horse or a kicking cow, I never could trust myself to deal reasonably with them. Follow this feeling back a few thousand years, and we reach the time when our forbears looked upon all the forces in nature as in league against them. The anger of the gods as shown in storms and winds and pestilence and defeat is a phase of the same feeling. A wild animal caught in a steel trap vents its wrath upon the bushes and sticks and trees and rocks within its reach. Something is to blame, something baffles it and gives it pain, and its teeth and claws seek every near object. Of course it is a blind manifestation of the instinct of self-defense, just as was my uncle's act when he kicked over his beehive, or as is the angler's impatience when his line gets tangled and his hook gets fast. If the Colorado bear caught his fish with a hook and line, how many times would he lose his temper during the day!

I do not think many animals show their kinship to us by exhibiting the trait I am here discussing. Probably birds do not show it at all. I have seen a nest-building robin baffled and delayed, day after day, by the wind that swept away the straws and

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rubbish she carried to the top of a timber under my porch. But she did not seem to lose her temper. She did not spitefully reclaim the straws and strings that would persist in falling to the porch floors, but cheerfully went away in search of more. So I have seen a wood thrush time after time carrying the same piece of paper to a branch from which the breeze dislodged it, without any evidence of impatience. It is true that when a string or a horsehair which a bird is carrying to its nest gets caught in a branch, the bird tugs at it again and again to free it from entanglement, but I have never seen any evidence of impatience or spite against branch or string, as would be pretty sure to be the case did my string show such a spirit of perversity. Why your dog bites the stone which you roll for him when he has found it, or gnaws the stick you throw, is not quite clear, unless it be from the instinct of his primitive ancestors to bite and kill the game run down in the chase. Or is the dog trying to punish the stick or stone because it will not roll or fly for him? The dog is often quick to resent a kick, be it from man or beast, but I have never known him to show anger at the door that slammed to and hit him. Probably, if the door held him by his tail or his limb, it would quickly receive the imprint of his teeth.

In reading Bostock on the "Training of Wild Animals," my attention was arrested by the remark

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that his performing lions and tigers are liable to suffer from "stage fright," like ordinary mortals, but that "once thoroughly accustomed to the stage, they seem to find in it a sort of intoxication well known to a species higher in the order of nature;" and furthermore, that "nearly all trainers assert that animals are affected by the attitude of an audience, that they are stimulated by the applause of an enthusiastic house, and perform indifferently before a cold audience." If all this is not mere fancy, but is really a fact capable of verification, it shows another human trait in animals that one would not expect to find there. Bears seem to show more human nature than most other animals. Bostock says that they evidently love to show off before an audience: "The conceit and good opinion of themselves, which some performing bears have, is absolutely ridiculous." A trainer once trained a young bear to climb a ladder and set free the American flag, and so proud did the bear become of his accomplishment, that whenever any one was looking on he would go through the whole performance by himself, "evidently simply for the pleasure of doing it." Of course there is room for much fancy here on the part of the spectator, but bears are in so many ways — in their play, in their boxing, in their walking — such grotesque parodies of man, that one is induced to accept the trainer's statements as containing a measure of truth.

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The preëminent danger of the animal trainer comes under the same conditions that it would probably come to him were he a trainer of wild men, to wit, when he stumbles or falls. In such a case, the lion or tiger is very apt to spring upon him. These beasts seem to know that a man is less formidable when down than when standing; when prone upon the ground, his power has departed. They also, like the human savage, often seize the opportunity for an attack upon him when his back is turned. A bold, threatening front cows an animal as it cows a man. The least sign of fear or of hesitation on the part of the trainer, and he is in danger. Self-confidence, self-control, an authoritative manner, count for just as much in our dealing with the animals as with men. How a bold, unhesitating manner will carry you through a pack of threatening dogs, while timidity or parleying endangers your calves! Act as though you were the rightful master of the place and had come to give orders, and the most threatening watch-dog gives way. Flee from a mad bull, a cross dog, a butting sheep, and your danger is vastly increased. Even an insolent rooster or a bellicose gander will strike you then. I have found that the best way to deal with the hive bee is by a bold and decisive manner. I would even recommend the same course with yellow-jackets; if you are bent on demolishing their nest, do it by a sudden bold stroke, and not by timid approaches.

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All kinds of bees seem disconcerted by a sudden onslaught.

Another human trait that seems almost universal among the lower animals is the coyness and reluctance of the female in her relations to the male. Her first impulse is to refuse and to flee. She is negative as the male is positive. Among the birds there is something like regular courtship, there is rivalry and jealousy and hostile collision on the part of both sexes. With the birds, the propagating instinct in the female is evidently not subject to the same law of recurring intervals that it is among mammals. Hence the female must be stimulated and won by the male. He addresses himself to her in a way that is quite exceptional, if it occurs at all, among mammals. His aim seems to be to kindle or quicken her sexual and mating impulses. In the case of mammals, these impulses recur at certain periods, and no courtship on the part of the male is necessary.

Just what part the gay plumes and the extra appendages of the males play in bird courtship I have discussed elsewhere. I think it is highly probable that the bright colors and ornamental plumes of the male react upon him, excite him, and increase his pride, his courage, and the impetuosity of his address. The birds that dance and perform before the females, during the breeding season, seem to show more and more excitement as the dance proceeds, apparently intoxicated by their own ardor. Just

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what determines the choice of the male and sets him in pursuit of a particular female is a question that greatly interests me. Does the matter turn upon some complementary variation too subtle for us to perceive? The mating of birds certainly seems like an act of choice; but just what determines it, how shall we find that out? Behold the sparrows in the street, three or four males apparently in a scrimmage with one female, surrounding her and playfully assaulting her, with spread plumage and animated chirping and chattering, while she, the centre of the group, strikes right and left, in a serious, angry mood, at her would-be suitors. What does it mean? Or, the robins in the spring, rushing across the lawn and forming sudden rough-and-tumble groups with a struggling and indignant female in the centre, or gleefully screaming, and quickly and apparently amicably separating? In all such cases the hen bird alone wears an angry and insulted air. What indignity has been put upon her? I know of nothing in human courtship analogous to this tumultuous and hilarious pursuit of the females by the cock sparrows and robins.

The gregarious instinct of birds and mammals does not differ essentially, as I see, from the same instinct in man, except that in man it is often for coöperation or mutual protection, while with the lower animals it seems purely social. Many birds flock in the fall and winter that live in pairs during

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the summer. Crows, for instance, have their rookeries, where vast numbers congregate to pass the winter nights, and they usually keep in bands or loose flocks during the winter days. Apparently, this clannishness in winter is for social cheer and good-fellowship alone. As they roost in naked, exposed treetops, they could not, it seems to me, perceptibly shield one another from the cold; while it is reasonable to think that the greater scarcity of food at this season would naturally cause them to scatter. But the centripetal force, so to speak, of the social instinct, triumphs over all else. Many species of our birds flock in the fall — the various blackbirds, the cedar-birds, the goldfinches, the siskins, the snowbirds, the tree and bank swallows, to say nothing of the waterfowl — some to migrate and some to pass the winter here. In similar conditions or similar stress of circumstances, human beings would probably act in a similar way; we should migrate in herds, or face some common calamity in large aggregates.

Indeed, the social instinct seems radically the same in all forms of animal life. The loneliness of a domestic animal separated from the herd, the homesickness of a dog or a horse when removed to a strange place, do not seem to differ very much from the feelings we experience under like circumstances. Attachment to places, attachment to persons, attachment to one another, to home and to

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mate — these feelings seem about the same in kind among all creatures. Of course they are more complex, far-reaching, and abiding in man than in the animals below him, but their genesis seems the same.

Among both birds and four-footed beasts, the maternal affection is doubtless greater than the paternal, and this also is human. But how brief and fugitive the affection is, compared with the same attachment in our own species! — of a few weeks' duration among our common birds, and a few months or a year among the mammals, but always as long as the well-being of the young requires it. When they become self-supporting, the parental affection ceases. And in a limited sense this is true in our own case.

If a bird loses its mate during the breeding season, the period of mourning and waiting is very brief, usually not more than a day or two. The need of rearing a family is urgent, and nature wastes no time in unavailing regrets. Just how the bereaved mate makes her or his wants known, I never could find out; but it seems there are always not far off some unmated birds of both sexes that are ready to step in and complete the circle once more. From sparrows to eagles, this seems to be the rule.

With what species, if any, the marriage unions last during life, I do not know. Neither do I know

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if anything like divorce, or unfaithfulness, or free love, ever takes place among the monogamous birds — probably not. The riot of the breeding instinct in the males confines itself to gay plumes, or songs, or grotesque antics, while the seriousness and preoccupation of the female, I doubt not, would prove an effectual warning to any gay Lothario among her neighbors, if such there happened to be.

I am convinced that birds have a sense of home, or something analogous to it, and that they return year after year to the same localities to nest. The few cases where I have been able to identify the particular sparrow or robin or bluebird confirm me in this belief.

Hermits among the birds or beasts are probably very rare, and I doubt if voluntary seclusion ever occurs. Sometimes an old male, vanquished and in a measure disabled by his younger rivals, may be driven out of the herd or pack and compelled to spend the remainder of his days in comparative solitude. Or an old eagle that has lost its mate may spend its days henceforth alone. The birds of prey, like the animals of prey, and like prowlers and bloodsuckers generally, are solitary in their habits.

The feeling of hostility towards strangers that all animals manifest in varying degrees, how distinctly we can trace it up through the savage races and through the lower orders of our social aggre-

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gates, till it quite fades out in the more highly civilized communities!

Animals experience grief over the loss of their young, but not over the death of a member of their flock or tribe. Death itself seems to have no meaning to them. When a bird seems to mourn for its lost mate, its act is probably the outcry of the breeding instinct which has been thwarted.

Do the birds and mammals sympathize with one another? When one bird utters a cry of distress, the birds of other species within hearing will hasten to the spot and join in the cry — at least in the breeding season. I have no proof that they will do it at other times. And I do not call this sympathy, but simply the alarm of the parental instinct, which at this season is very sensitive. The alarm-cry of many birds will often put four-footed animals on the lookout. The language of distress and alarm is a universal language, which all creatures understand more or less. But I doubt if sympathy as we know it — the keen appreciation of the suffering or the misfortune of another, which implies power in a measure to put ourselves in that other's place — even in its rudimentary form, exists among the lower orders. Among the domestic fowls, a cry of distress from one of them usually alarms the others: a cry from a chicken brings the mother hen to the rescue; this is the maternal instinct, and the instinct of self-preservation which all animals must have or

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their race would perish. A certain agonized call from a member of a herd of cattle will at once bring the other members to the spot, with uplifted heads and threatening horns. This, again, is the instinct of self-preservation. This, I say, animals must have, but they do not have to have sympathy any more than they have to have veneration, or humility, or the æsthetic sense. But fear — think how important this is to them — blind, unreasoning fear, but always alert and suspicious.

Fear in the human species is undoubtedly of animal origin. How acute it often is in young children — the fear of the dark, of the big, of the strange, and of the unusual! The first fear I myself remember was that of an open door at night leading into a dark room. What a horror I felt at that mysterious cavernous darkness! — and this without any idea of the danger that might lurk there. The next fear I recall was a kind of panic, when I was probably three or four years of age, at the sight of a hawk sailing against the sky above me. I hurriedly climbed over the wall and hid behind it. Later, when I was ten or twelve years of age, my fear took a less animal form — a fear of spooks and hobgoblins, induced, no doubt, by the fearsome superstitions of my elders. Now I am not conscious of any physical or superstitious fears, but there is plenty of moral cowardice left. My little granddaughter, when two and a half years old, was

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filled with terror of the sea as she saw it for the first time from the beach.

Fear seems to have the same effect upon both man and beast, causing trembling of the muscles, a rapid beating of the heart, a relaxation of the sphincters, momentary weakness, confusion, panic, flight. It would be interesting to know if the blood leaves the capillaries in the faces of animals during sudden fright, as it does in man, producing paleness.

The panic that sometimes seizes a multitude of animals, resulting in a stampede, a blind, furious rush away from the real or the imaginary danger, seems to differ but little from that which at times seizes the human multitude in theatre, or circus, or on the field of battle. It is a kind of madness, augmented and intensified by numbers. The contagion of fear works among all creatures, like the contagion of joy, or anger, or any other sudden impulse. These things are "catching;" an emotional state in one man or one animal tends to beget the same state in all other near-by men or animals, either through imitation, or through some psychic law not well understood. Like begets like throughout nature. Just as our bodily temperature rises in a crowd, so does that psychic state become more acute in which we are liable to sudden enthusiasms or panic, fear or animal cruelty. Mobs are guilty of things, especially in the way of violence, that the separate members of them would never think of

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doing, just as nations and corporations will exhibit a meanness and hoggishness that would shame the individuals composing them.

It is a question whether or not the lower animals ever experience the feeling we know as revenge — that they cherish a hatred or a secret enmity toward one of their own kind or toward a person, in the absence of that person or fellow. Their power of association, which is undoubted, would call up the old anger on the sight of an object that had injured them, but they probably do not in the meantime carry any feeling of ill-will as we do, because they do not form mental concepts. And yet I have known things to happen that point that way. It is well known that the blue jay destroys the eggs of other birds. One day I found a nest of a blue jay with its five eggs freshly punctured — each egg with a small hole in it as if made by the beak of a small bird, as it doubtless had been. Was this revenge on the part of some victim of the jay's? One can only conjecture. Roosevelt tells this curiously human anecdote of a bear. A female grizzly was found by a hunter lying across a game trail in the woods. The hunter shot the bear as she was about to charge him, and on examining the spot where she had been lying, he found that it was the freshly made grave of her cub. He conjectured that a male grizzly or a cougar had killed the cub in the absence of the mother, and that on her return she had buried it,

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and had lain down upon the grave waiting to wreak her vengeance upon the murderer of her young. But this may be only the plausible human interpretation of the fact. Just what the bear's state of mind was, we have no means of knowing.

The dog undoubtedly exhibits more human traits than any other lower animal, and this by reason of his long association with man. There are few of our ordinary emotions that the dog does not share, as joy, fun, love of adventure, jealousy, suspicion, comradeship, helpfulness, guilt, covetousness, and the like, or feelings analogous to these — the dog version of them. I am not sure but that the dog is capable of contempt. The behavior at times of a large dog toward a small, the slights he will put upon him, even ejecting his urine upon him, is hardly capable of any other interpretation. The forbearance, too, which a large dog usually shows toward a touchy little whiffet, never resenting its impudent attacks, is very human. "A barking dog never bites" is an old saying founded upon human nature as well as upon dog nature. The noisy blusterer is rarely dangerous, whether man or dog. I do not agree with Stevenson that the dog is a snob. The key to a dog's heart is kindness. He will always meet you halfway and more. I have been asked why the farm dog usually shows such hostility to tramps and all disreputable-looking persons. It is not their looks that disturb the dog, but

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their smell — a strange, unknown odor. This at once puts him on his guard and excites his enmity. There is little speculation in the eye of a dog, but his nose is keen and analytical.

The dog, through his long intercourse with man, has become charged with our human quality, as steel is charged by a magnet. Yet I am told that a tame wolf or a tame fox fawns and wags his tail and tries to lick his master's face, the same as the dog. At any rate, the dog does many things that we can name only in terms applicable to ourselves. My dog coaxes me to go for a walk, he coaxes me to get upon my lap, he coaxes for the food I am eating. When I upbraid him, he looks repentant and humiliated. When I whip him, he cries, when I praise him, he bounds, when I greet him in the morning, he whines with joy. It is not the words that count with him, it is the tone of the voice.

When I start out for a walk, he waits and dances about till he sees which way I am going. It seems as if he must at such times have some sort of mental process similar to my own under like circumstances. Or is his whole behavior automatic — his attitude of eagerness, expectancy, inquiry, and all? as automatic as the wagging of his tail when he is pleased, or as his bristling up when he is angry? It evinces some sort of mental action, but the nature of it is hard to divine. When he sits looking vaguely out upon the landscape, or rests his chin upon his paws

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and gazes into the fire, I wish I knew if there were anything like currents of thought, or reminiscences, or anticipations passing through his mind. When I speak sternly to him and he cowers down or throws himself on his back and puts up his paws pleadingly, I wish I knew just the state of his mind then. One day my dog deserted me while I was hunting, and when I returned, and before I had spoken a word to him, he came creeping up to me in the most abject way, threw himself over, and put up his pleading paws, as if begging forgiveness. Was he? We should call it that in a person. Yet I remember that I upbraided him when he first showed the inclination to desert me, and that fact may account for his subsequent behavior.

When you speak to your dog in a certain way, why does he come up to you and put out his front legs and stretch, and then stretch his hind legs, and maybe open his mouth and gape? Is it an affectation, or a little embarrassment because he does not know what you are saying? All dogs do it. The human traits of the dog are very obvious. One time I drove many miles through the country with my small mongrel black and tan dog Lark with me, often on the seat by my side. When he was in the wagon and other dogs came out and barked at us, Lark was very brave and answered back defiantly and threateningly; but when he was upon the ground and other dogs came out, Lark was as meek

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and non-resisting as a Quaker. Then let me take him up out of harm's way, and see how his tone would change, and what a setting-out he would give those dogs!

I do not believe that animals ever commit suicide. I do not believe that they have any notions of death, or take any note of time, or ever put up any "bluff game," or ever deliberate together, or form plans, or forecast the seasons. They may practice deception, as when a bird feigns lameness or paralysis to decoy you away from her nest, but this of course is instinctive and not conscious deception. There is on occasion something that suggests coöperation among them, as when wolves hunt in relays, as they are said to do, or when they hunt in couples, one engaging the quarry in front, while the other assaults it from the rear; or when quail roost upon the ground in a ring, their tails to the centre, their heads outward; or when cattle or horses form a circle when attacked in the open by wild beasts, the cattle with their heads outward, and the horses with their heels. Of course all this is instinctive, and not the result of deliberation. The horse always turns his tail to the storm as well, and cows and steers, if I remember rightly, turn their heads.

A family of beavers work together in building their dam, but whether or not they combine their strength upon any one object and thus achieve unitedly what they could not singly, I do not know.

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Of course among the bees there is coöperation and division of labor, but how much conscious intelligence enters into the matter is beyond finding out.

Leadership among the animals, when it occurs, as among savage tribes, usually falls to the strong, to the most capable. And such leaders are self-elected: there is nothing like a democracy in the animal world. Troops of wild horses are said always to have a leader, and it is probable that bands of elk and reindeer do also. Flocks of migrating geese and swans are supposed to be led by the strongest old males; but among our flocking small birds I have never been able to discover anything like leadership. The whole flock acts as a unit, and performs its astonishing evolutions without leaders or signals.

In my youth, upon the farm, I observed that in a dairy of cows there was always one master cow, one to whose authoritative sniff, or gesture, or thrust, all others yielded, and she was usually the most quiet and peaceful cow in the herd.

The male animal, as compared with the female, is usually the more aggressive and domineering, except among birds of prey, where the reverse is true. Roosevelt says that a band of antelope, as of elk and deer, is ordinarily led by an old doe, but that when danger threatens, a buck may spring to the leadership.

In the breeding season the pronghorn buck has

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his harems — all the does he can steal or cajole or capture from his rivals. "I have seen a comparatively young buck," says Roosevelt, "who had appropriated a doe, hustle her hastily out of the country as soon as he saw another antelope in the neighborhood; while on the other hand, a big buck, already with a good herd of does, will do his best to appropriate any other that comes in sight."

On the seal islands of Alaska we saw many old bull seals with their harems about them — a dozen or more demure-looking females resting upon low bowlders, while their lord and master sat perched above them on a higher rock. The defeated males, too young or too old to hold their own against their rivals, hung in ill-humored dejection about the neighborhood. I have read that on the Pampas in South America, wild stallions will capture and hurry away domestic mares, if they have a chance.

Animals are undoubtedly capable of feeling what we call worry and anxiety just as distinctly as they feel alarm or joy, only, of course, these emotions are much more complex in man. How the mother bird seems to worry as you near her nest or her young; how uneasy the cow is when separated from her calf, or the dog when he has lost his master! Do these dumb kindred of ours experience doubts and longings and suspicions and disappointments and hopes deferred just as we do? — the same in kind, if not in degree?

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The sheer agony or terror which an animal is capable of feeling always excites our pity. Roosevelt tells of once coming upon a deer in snow so deep that its efforts to flee were fruitless. As he came alongside of it, of course to pass it by untouched, it fell over on its side and bleated in terror. When John Muir and his dog Stickeen, at the imminent peril of their lives, at last got over that terrible crevasse in the Alaska glacier, the dog's demonstrations of joy were very touching. He raced and bounded and cut capers and barked and felicitated himself and his master as only a dog can.

The play of animals seems strictly analogous to the play of man, and I have no doubt that the reason of the one, whatever that be, is the reason of the other. Whether play is to be accounted for upon the theory of surplus energy, as Spencer maintains, or upon the theory of instinctive training and development — a sort of natural, spontaneous school or kindergarten that has reference to the future wants of the animal, as the German psychologist Karl Groos argues — a biological conception of play — its genesis is no doubt the same both in man and beast. The main difference is that the play of one is aimless and haphazard, while that of the other has method and purpose. Animals have no rules or systems, and yet I have often seen two red squirrels engaged in what seemed precisely analogous to the boys' game of tag. Up and down and

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from tree to tree they would go, until one of them overtook the other, when it seemed to become its turn to flee and be pursued. But just how much method there is in such a game, it is impossible to determine. In all cases, the play of animals tends to develop those powers of speed, or agility, or strength that their ways of living call for. The spirit of play gradually leaves an animal at maturity, as it leaves man.

A trait alike common to man and beast is imitativeness; both are naturally inclined to do what they see their fellows do. The younger children imitate the elder, the elder imitate their parents, their parents imitate their neighbors. The young writer imitates the old, the young artist copies the master. We catch the trick of speech or the accent of those we much associate with; we probably, in a measure, even catch their looks. Any fashion of dress or equipage is as catching as the measles. We are more or less copyists all our lives. Among the animals, the young do what they see their parents do; this, I am convinced, is all there is of parental instruction among them; the young unconsciously follow the example of their elders. The bird learns the song of its parent. If it never hears this song, it may develop a song of its own — like its parent's song in quality, of course, but unlike it in form. Or it may acquire the song of some other species.

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Darwin thinks that birds have "nearly the same taste for the beautiful as we have," except, of course, that in man "the sense of beauty is manifestly a more complex feeling and is associated with various intellectual ideas." It seems to me that if we mean by taste the appreciation of the beautiful, it is as distinctly a human gift as reason is, or as is the sense of humor, or the perception of the spiritual and the ideal. Shall we say the lilies of the field have taste because Solomon in all his glory was not arrayed like one of these? or that the trees have taste because of their grace and beauty of form? or the insects because of their many beautiful colors and patterns? I doubt if the æsthetic feeling is even rudimentary in birds, any more than are our moral and other intellectual traits. It is thought that the male bird sings to charm the female. Are such discordant notes, then, as the gobble of the turkey, the crowing of the cock, the scream of the peacock or of the guinea hen, to charm the female? When the rooster crows, the nearby hens shake their heads as if the sound pained them, as doubtless it does.

Why, then, do birds sing? Is it from a love of beautiful sounds? I can only answer that it seems to be a trait inherent in the male sexual principle, as much so as are gay plumes and ornamental appendages; it is one of the secondary sexual characteristics. It is very significant that the sweetest

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songsters to our ears are, as a rule, of the plainest colors and free from extra plumes and ornaments. I have yet to discover any evidence of pleasure on the part of the female in the songs of her male suitors. The male does not even sing for his own ear; if he did, when his vocal powers are defective, as is sometimes the case, he would quit singing. But such is not the case; he sings because he has the impulse to sing, and that is reason enough.

I know but one fact in the life of our birds that suggests anything like taste. I refer to the nesting-habits of the hummingbird, and of the little blue-gray gnatcatcher and the wood pewee. The nests of these birds are always neatly thatched with lichens, thus perfectly realizing the dream of the true domestic architect, of making the structure blend with its surroundings. The nests of nearly all birds blend well with their surroundings, because the material at hand is itself of a dull, neutral character. But the lichens which the hummer and the gnatcatcher and our wood pewee use seem, at first sight, an extra touch. Yet I cannot credit it to taste or to the love of the beautiful, because it is beautiful only to the cultivated, artistic taste of man. To a savage, or even to those much higher in civilization, it would not appear beautiful. A certain degree of culture has to be reached before we find beauty in these quieter things. The reason why these birds thatch the outside of their nests with lichens is

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doubtless this : the nests are built of a kind of down that would render them very frail and pervious to the rain were they not stayed and thatched with some firmer material. The lichens and spiders' webs bind them together and keep them in shape. Hence I should say that utility alone governed the bird in this use of lichens. Bright objects attract children, attract birds, attract quadrupeds, but this attraction is far enough from what we mean by taste or the love of the beautiful.